

Mantis Plant Guard

The Mantis Plant Guard protects your plants from possible damage while cultivating with the Mantis Tiller. Attach the Plant Guard to your tiller/cultivator. Make sure the tines are in the 'cultivating' position. The Plant Guard gently pushes aside overhanging branches, leaves, vegetables and flowers before there is any risk of them becoming snagged. Please, observe the assembly instructions on the backpage.

(FR)

Protège-plantes

Le protège-plantes Mantis protège vos plantes pendant l'utilisation de la motobêche Mantis. Installez le protège-plantes sur votre motobêche -bineuse. Veillez à ce que les dents soient dans la position « binage ». Le protège-plantes écarte délicatement les branches, feuilles, légumes et fleurs pendantes se trouvant devant l'appareil avant qu'elles ne risquent de se prendre dedans. Veuillez suivre les instructions d'installation à la page arrière.

(ES)

Protector de las plantas

El protector de las plantas, para su uso en las excavadoras Mantis, protege las plantas contra la posibilidad de dañarlas mientras cultiva con su excavadora Mantis. Instale el protector de plantas en su excavadora y/o cultivadora. Asegúrese de que las cuchillas estén en la posición de cultivo. El protector de las plantas hace delicadamente a un lado las ramas colgantes, hojas, legumbres y flores, antes de que exista el riesgo de que puedan ser atrapadas por las cuchillas. Por favor, siga al pie de la letra las instrucciones de ensamble indicadas al reverso de la página.

WARNING • DANGER
IMPROPER USE OR CARE OF THESE ATTACHMENTS OR FAILURE TO WEAR PROPER
PROTECTION CAN RESULT IN SERIOUS INJURY.

READ AND UNDERSTAND THE RULES FOR SAFE OPERATION AND ALL INSTRUCTIONS
IN THIS MANUAL.

WEAR HEARING AND EYE PROTECTION.

Warnings - Do's

Read and understand the owner's manual. Pay particular attention to all sections regarding safety.

1. Always keep a firm grip on both handles while the attachment is moving and/or the engine is running. **BE AWARE!!** The tines may coast after throttle trigger is released. make sure tines have come to a complete stop and engine is off before letting go of the tiller.

2. Always maintain a firm footing and good balance, do not overreach while operating the tiller. Before you start to use the tiller check the work area for obstacles that might cause you to lose your footing, balance or control of the machine.

3. Always keep area clear of children, pets and bystanders.

4. Always stay alert. Watch what you are doing and use common sense. Do not operate unit when fatigued.

5. Always dress properly. Do not wear loose clothing or jewelry, they might get caught in moving parts. Use sturdy gloves. Gloves reduce the transmission of vibration to your hands. Prolonged exposure to vibration can cause numbness and other ailments. Wear non-skid foot wear to ensure secure and proper footing.

6. Always wear ear and eye protection. Eye protection must meet ANSI Z 87.1. To avoid hearing damage we recommend hearing protection be worn whenever using the equipment.

7. Always keep a safe distance between two or more people when

working together.

8. Always inspect your attachment before each use and ensure that all handles, guards and fasteners are secure, operating, and in place.

Always maintain and examine your Tiller and attachments with care. Follow maintenance instructions given in Tiller manual.

10. Always store attachments in a sheltered area (a dry place) not accessible to children. The Tiller as well as fuel should not be stored in a house.

Warnings - Don'ts

Don't use Tiller with one hand, keep both hands on handles with fingers and thumbs encircling the handles, while attachment is moving, and engine is running.

Don't overreach. Keep a good footing at all times.

Don't attempt to clear attachment while it is moving. Never try to remove jammed material before switching the engine off and making sure the attachment has stopped completely.

Don't allow children or incapable people to operate the Tiller.

Don't operate while under the influence of alcohol or drugs.

Don't attempt to repair the attachment. Have repairs made by a qualified dealer or repairman. See that only original Mantis parts are used.

WARNING • DANGER

HANDLE FUEL WITH CARE, IT IS HIGHLY FLAMMABLE. FUELING A HOT ENGINE OR NEAR AN IGNITION SOURCE
CAN CAUSE A FIRE AND RESULT IN SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE.

Engine Fuel Warnings - Do's

Always use fresh gasoline in the fuel mixture. Stale gasoline can cause leakage.

Always pull starter cord slowly until resistance is felt. Then pull cord rapidly to avoid kickback and prevent arm or hand injury.

Always operate engine with spark arrestor installed and operating properly. The use of spark arrestor mufflers is required bylaw in the state of California (Section 4442 of the California Public Resources Code), as well as in other states or municipalities. Federal laws apply on federal lands.

Engine/Fuel Warnings - Don'ts

Don't fuel, refuel or check fuel while smoking or near an open flame or other ignition source. Stop engine and be sure it is cool before refueling.

Don't leave the engine running while the Tiller is unattended. Stop engine before putting the Tiller down or while transporting from one place to another.

Don't refuel, start or run this Tiller indoors or in an improperly ventilated area.

Don't run engine when electrical system causes spark outside the cylinder. During periodical checks of the spark plug, keep plug a safe distance from cylinder to avoid burning of evaporated fuel from cylinder.

Don't check for spark with spark plug or plug wire removed. use an approved tester.

Don't crank engine with spark plug removed, except when preparing to store Tiller for the off season.

Don't run engine when the odor of gasoline is present or other explosive conditions exist.

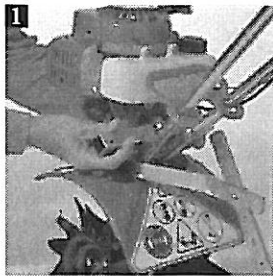
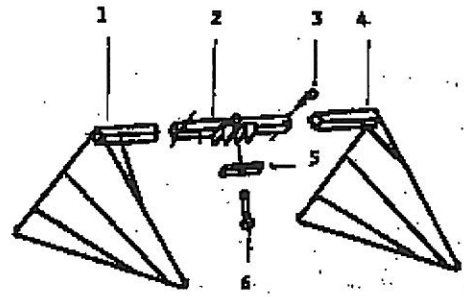
Don't operate the unit if gasoline is spilled. Clean up spill completely before starting engine.

Don't operate your Tiller if there is an accumulation of debris around the muffler, and cooling fins.

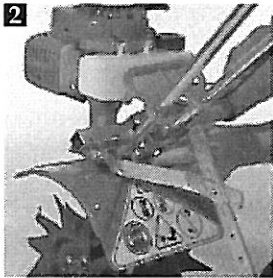
Don't touch hot mufflers, cylinders or cooling fins as contact may cause serious burns.

Plant Guard Instructions

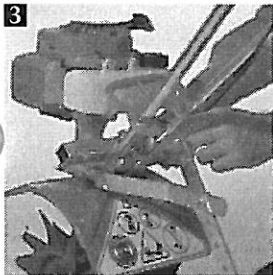
Photos shown with optional Wheel Set attachment.



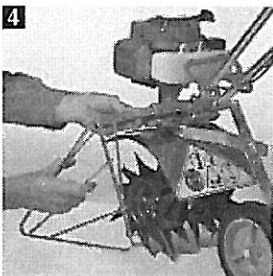
Secure the Universal Holder (key #2) below the fuel tank onto the tiller handles.



Position the Metal Plate (key #5) below the tiller handles and insert the Bolt (key #6) into the threaded hole in the Universal Holder (key #2).

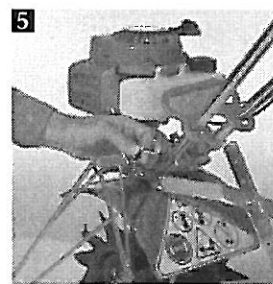


Tighten the Bolt (key #6) until the Universal Holder (key #2) is secured to the tiller handles.

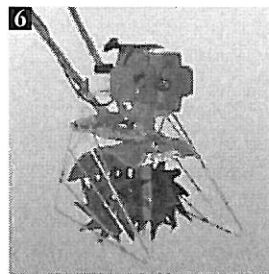


Insert the Right and Left Plant Guard (key #1 & 4) into the universal holder. Make sure that the Plant Guard is facing forward as shown.

No	Quan	Description
1	1	Right Plant Guard
2	1	Universal Holder
3	2	Retaining Pin
4	1	Left Plant Guard
5	1	Metal Plate
6	1	Bolt M8 x 45mm



Finally, insert the retaining pin that secures the right and left Plant Guards to the universal holder.



The Mantis Tiller, with the Plant Guard, is now ready for use. Always observe the Mantis Tiller operating instructions.

ATTACHMENT LIMITED SERVICE & WARRANTY POLICY

The MANTIS Tiller and its attachments are guaranteed against defects in material and workmanship for a period of TWO YEARS FROM DATE OF PURCHASE. All tines for the tiller are guaranteed for life against breakage. Any Mantis products or parts found to be defective within the warranty period are to be returned to Mantis.

Transportation charges on parts and units submitted for replacement under this warranty must be borne by the purchaser..

THIS WARRANTY shall not be effective if the product has been the subject of misuse, negligence or accident or if the product has been repaired or altered outside of

the factory in any respect which affects its condition or operation.

Mantis shall not be liable for any special indirect or consequential damages arising from defective equipment. Any implied warranty, including merchantability or fitness for a particular purpose, shall not extend beyond the written warranty period.

LIFETIME TINE GUARANTEE

Our tines not only work better than the rest, they're also guaranteed for life against breakage. If any tine ever breaks in normal use send the broken tine back to us and we'll send you replacement tine FREE!



AVERTISSEMENT • DANGER

L'UTILISATION OU L'ENTRETIEN INAPPROPRIÉ DE CES ACCESSOIRES, OU L'OMISSION DE PORTER LA PROTECTION ADEQUATE, Y COMPRIS UN CASQUE ANTIBRUIT ET DES LUNETTES DE PROTECTION, PEUT ENTRAÎNER DES BLESSURES GRAVES.

VEUILLEZ LIRE ET COMPRENDRE LES REGLES DE FONCTIONNEMENT SUR, AINSI QUE TOUTES LES INSTRUCTIONS CONTENUES DANS CE MANUEL.

Avertissements - A faire

Veillez lire et comprendre le manuel d'instructions. Il convient d'accorder une attention particulière à toutes les sections relatives à la sécurité.

1. Gardez toujours une prise ferme sur les deux poignées pendant que l'accessoire est en mouvement et/ou que le moteur tourne. **SOYEZ VIGILANT !!** Les dents peuvent bouger par inertie après qu'on aura relâché la gâchette de l'obturateur. Assurez-vous que les dents sont complètement arrêtées et que le moteur est à l'arrêt avant de lâcher la motobèche.

2. Maintenez toujours une assise ferme et un bon équilibre, ne présumez pas trop de vos forces en utilisant la motobèche. Avant de commencer à utiliser la motobèche, vérifiez l'aire de travail pour y relever tout obstacle susceptible de vous faire perdre l'équilibre ou le contrôle de la machine.

3. Gardez toujours l'aire de travail exempte d'enfants, d'animaux domestiques et de curieux.

4. Soyez toujours vigilant. Regardez ce que vous faites et faites preuve de discernement. N'utilisez pas la motobèche lorsque vous êtes fatigué.

5. Habillez-vous toujours adéquatement. Ne portez pas de bijoux ou de vêtements lâches car ils pourraient être happés par les pièces en mouvement. Utilisez des gants résistants. Les gants réduisent la transmission de vibrations à vos mains. L'exposition prolongée aux vibrations peut causer un engourdissement et d'autres problèmes. Portez des chaussures antidérapantes pour assurer une posture sûre et adéquate.

6. Portez toujours des lunettes de protection et un casque antibruit. Les lunettes de protection doivent satisfaire la norme ANSI Z 87.1. Pour éviter les lésions auditives, nous recommandons le port d'un casque antibruit lors de chaque utilisation de la motobèche.

7. Conservez toujours une distance sûre entre deux ou plus de deux personnes lorsque vous ne travaillez pas seul.

8. Inspectez toujours votre motobèche avant chaque usage et assurez-vous que tous les protecteurs, poignées et attaches sont solides, en état de marche et en place.

9. Entretenez et examinez toujours votre motobèche et ses accessoires avec soin. Suivez les instructions d'entretien données dans le présent manuel.

10. Rangez toujours les accessoires à l'abri (endroit sec) et où les enfants n'ont pas accès. La motobèche ainsi que le carburant ne doivent pas être rangés dans la maison.

Avertissements - A ne pas faire

N'utilisez pas la motobèche d'une seule main, gardez les deux mains sur les poignées, doigts et pouces encerclant celles-ci pendant que les dents sont en mouvement et que le moteur tourne.

Ne présumez pas trop de vos forces. Conservez une bonne posture et un bon équilibre en tout temps.

Ne tentez pas de dégager un accessoire lorsque celui-ci est en mouvement. Ne tentez jamais de retirer des matériaux bloqués avant de mettre le moteur à l'arrêt et de vous assurer que l'accessoire est complètement arrêté.

Ne laissez pas les enfants ou les personnes incapables de s'en servir utiliser la motobèche.

N'utilisez jamais la motobèche si vous êtes sous l'influence de l'alcool ou de stupéfiants.

Ne tentez pas de réparer l'accessoire. Confiez les réparations à un technicien ou revendeur qualifié. Assurez-vous que seules des pièces Mantis d'origine sont utilisées.

AVERTISSEMENT • DANGER

MANIEZ LE CARBURANT AVEC SOIN, IL EST TRÈS INFLAMMABLE. LE REMPLISSAGE EN CARBURANT D'UN MOTEUR CHAUD OU A PROXIMITÉ D'UNE SOURCE D'ALLUMAGE PEUT PROVOQUER UN INCENDIE ET CAUSER DES BLESSURES GRAVES ET/OU DES DOMMAGES CONSIDÉRABLES.

Avertissements concernant le moteur et le carburant - A faire

Utilisez toujours de l'essence fraîche dans le mélange de carburant. De l'essence viciée peut causer des fuites.

Tirez toujours le cordon du démarreur lentement jusqu'à ce qu'une résistance se fasse sentir. Tirez ensuite le cordon rapidement pour éviter les rebonds et prévenir des blessures au bras ou à la main.

Faites toujours marcher le moteur avec un pare-étincelles installé et en bon état de marche. La section 4442 du California Public Resources Code, ainsi que d'autres états et municipalités, exigent l'utilisation d'un pare-étincelles. La loi fédérale américaine est applicable au domaine fédéral.

Avertissements concernant le moteur et le carburant - A ne pas faire

Ne faites pas le plein de carburant et ne vérifiez pas le carburant en fumant, ou à proximité d'une flamme nue ou autre source d'allumage. Arrêtez le moteur et assurez-vous qu'il est refroidi avant de refaire le plein.

Ne faites pas le plein de carburant et ne mettez pas en marche ou ne faites pas fonctionner cette motobèche à l'intérieur ou dans un endroit mal aéré.

Ne faites pas tourner le moteur lorsque le système électrique provoque une étincelle à l'extérieur du cylindre. Durant les vérifications périodiques de la bougie, tenez celle-ci à une distance sûre du cylindre pour éviter de brûler le carburant évaporé du cylindre.

Ne vérifiez pas la formation d'étincelle, la bougie ou le fil de bougie étant enlevé. Utilisez un dispositif d'essai approprié.

Ne lancez pas le moteur, la bougie étant enlevée, sauf lorsque vous vous préparez à ranger la motobèche pour plusieurs mois.

Ne faites pas tourner le moteur s'il y a une odeur d'essence ou s'il existe d'autres conditions explosives.

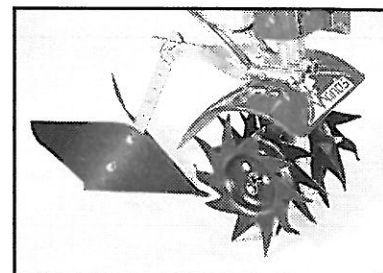
N'utilisez pas la motobèche si de l'essence a été déversée. Nettoyez complètement l'essence renversée avant de mettre le moteur en marche.

N'utilisez pas la motobèche en cas d'accumulation de débris autour du silencieux et des ailettes de refroidissement.

Ne touchez pas aux silencieux, cylindres ou ailettes de refroidissement chauds car le contact peut causer des brûlures graves.

PLOW ATTACHMENT

This fantastic accessory is the best plowing attachment you have ever come across. It does the job much faster and more simply than you could do by hand. Whether deep or shallow - it forms all furrows in a uniform manner. It's great for all vegetables where the tending of the soil is important.



WARNING • DANGER

IMPROPER USE OR CARE OF THESE ATTACHMENTS OR FAILURE TO WEAR PROPER PROTECTION CAN RESULT IN SERIOUS INJURY.

READ AND UNDERSTAND THE RULES FOR SAFE OPERATION AND ALL INSTRUCTIONS IN THIS MANUAL. WEAR HEARING AND EYE PROTECTION.

Warnings - DO's

Read and understand the owner's manual. Pay particular attention to all sections regarding safety.

1. Always keep a firm grip on both handles while the attachment is moving and/or the engine is running. **BE AWARE!** The tines may coast after the throttle trigger is released. Make sure the tines have come to a complete stop and the engine is off before letting go of the tiller.
2. Always maintain a firm footing and good balance. Do not overreach while operating the tiller. Before you start to use the tiller, check the work area for obstacles that might cause you to lose your footing, balance or control of the machine.
3. Always keep the area clear of children, pets and bystanders.
4. Always stay alert. Watch what you are doing and use common sense. Do not operate the unit when fatigued.
5. Always dress properly. Do not wear loose clothing or jewelry - they might get caught in moving parts. Use sturdy gloves. Gloves reduce the transmission of vibration to your hands. Prolonged exposure to vibration can cause numbness and other ailments. Wear non-skid footwear to ensure secure and proper footing.
6. Always wear ear and eye protection. Eye protection must meet ANSI Z 87.1. To avoid hearing damage, we recommend hearing protection be worn whenever using the equipment.
7. Always keep a safe distance between two or more people when working together.
8. Always inspect your attachment before each use and ensure that all handles, guards and fasteners are secure, operating and in place.
9. Always maintain and examine your Tiller and attachments with care. Follow maintenance instructions given in the Tiller manual, before operating the equipment.
10. Always store the attachments in a sheltered area (a dry place) not accessible to children. The Tiller, as well as fuel, should not be stored in a house.

Warnings - DON'Ts

Don't use the Tiller with one hand. Keep both hands on the handles, with fingers and thumbs encircling the handles, while the attachment is moving and engine is running.

Don't overreach and keep a good footing at all times.

Don't attempt to clear the attachment while it is moving. Never try to remove jammed material before switching the engine off and making sure the attachment has stopped completely.

Don't allow children or incapable people to operate the Tiller.

Don't operate while under the influence of alcohol or drugs.

Don't attempt to repair the attachment. Have any repairs made by a qualified dealer or repairman. See that only original Mantis parts are used.

WARNING • DANGER

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Engine Fuel Warnings - DO's

Always use fresh gasoline in the fuel mixture. Stale Gasoline can cause leakage.

Always pull the starter cord slowly until resistance is felt. Then, pull the cord rapidly to avoid kickback and prevent arm or hand injury.

Always operate the engine with the spark arrestor installed and operating properly.

Engine Fuel Warnings - DON'Ts

Don't fuel, refuel or check fuel while smoking or near an open flame or other ignition source. Stop the engine and make sure it is cool before refueling.

Don't leave the engine running while the Tiller is unattended. Stop the engine before putting the Tiller down or while transporting it from one place to another.

Don't refuel, start or run the Tiller indoors or in an improperly ventilated area.

Don't run the engine when the electrical system causes a spark outside the cylinder. During periodic checks of the spark plug, keep the plug a safe distance from the cylinder to avoid burning of evaporated fuel from the cylinder.

Don't check for a spark with the spark plug or plug wire removed. Use an approved tester.

Don't run the engine when the odor of gasoline is present or other explosive conditions exist.

Don't operate the unit if gasoline is spilled. Clean up the spill completely before starting the engine.

Don't operate your Tiller if there is an accumulation of debris around the muffler and cooling fins.

Don't touch hot mufflers, cylinders or cooling fins as contact may cause serious burns.

ATTACHMENT LIMITED SERVICE & WARRANTY POLICY

The Mantis Tiller and its attachments are guaranteed against defects in material and workmanship for a period of **TWO YEARS FROM DATE OF PURCHASE**. All tines for the tiller are guaranteed for life against breakage. Any Mantis products or parts found to be defective within the warranty period are to be returned to our factory at Southampton, Pennsylvania.

Transportation charges on parts and units submitted for replacement under this warranty must be borne by the purchaser.

If you ever need Mantis parts, we'll get them right out to you. Usually within 48 hours.

THIS WARRANTY shall not be effective if the product has been the subject of misuse, negligence or accident or if the product has been repaired or altered outside of our Southampton factory in any respect which affects its condition or operation.

Mantis shall not be liable for any special indirect or consequential damages arising from defective equipment. Any implied warranty, including merchantability or fitness for a particular purpose, shall not extend beyond the written warranty period.

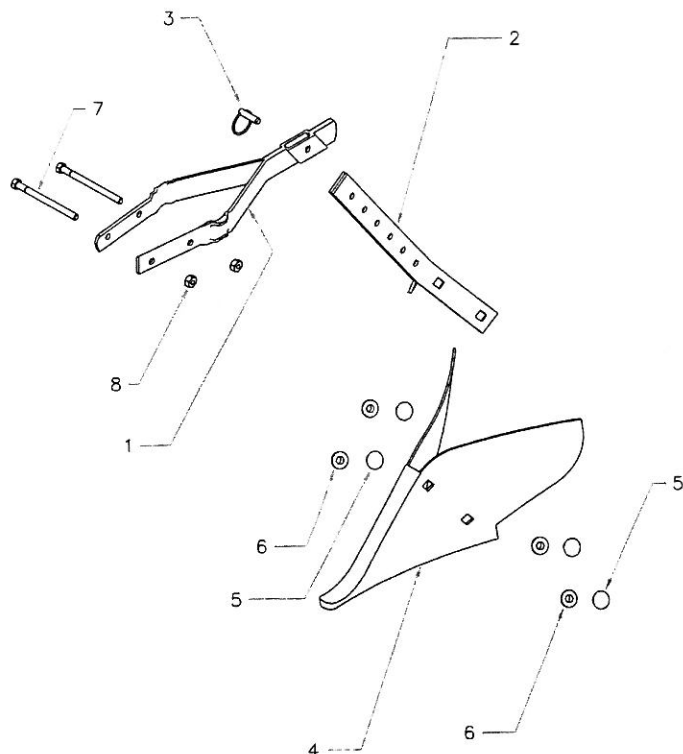
For additional information on the care and use of any Mantis attachment, please call your local authorized Mantis Dealer.



1028 Street Road
Southampton PA 18966
215-355-9700

P/N 400711 4-00
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Key #	Part #	Description	Qty
1	449	Upper Bracket	1
2	401102	Plow Mounting Bracket	1
3	443	Lock Pin	1
4	401100	Plow Blade 1	
5	400503	$\frac{5}{16}$ -18 x $\frac{3}{4}$ Carriage Bolt	4
6	114B	$\frac{5}{16}$ -18 W/2 Head Nut	4
7	4049	$\frac{1}{4}$ -20 x 3 $\frac{1}{4}$ Bolt	2
8	972	$\frac{1}{4}$ -20 Lock Nut	2

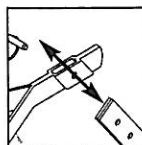


PLOW

NOTE: In the instructions that follow, assume that you are standing behind the Tiller as you would in tilling or cultivating.

ASSEMBLY PROCEDURE

1. Remove the nuts, bolts, and plates that secure the tiller handles to the transmission.
2. Replace these components with key #'s 1, 7, & 8 from the plow kit. Key # 1 is a Y shaped piece; make sure that this piece is installed so the bottom of the Y is to the rear of the tiller. Position Key #1 piece so that when the Mounting Bracket (Key #2) is slid into its position, the Mounting Bracket (Key #2) goes toward the rear and NOT toward the tines.
3. Line up the holes of the plow mounting bracket (key#2) with the holes in the plow blade (key# 4) and assemble with four carriage bolts and whiz head nuts provided (key #'s 5 & 6).
4. Tighten all nuts.
5. The plow can now be attached to the tiller by inserting the bracket through the slot in the upper bracket and securing with the lock pin (key# 3).
6. When not using the plow, pull the lock pin out and slide the plow bracket out of the upper bracket.

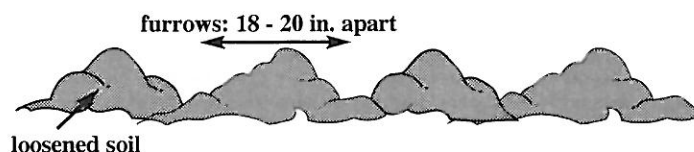


OPERATION

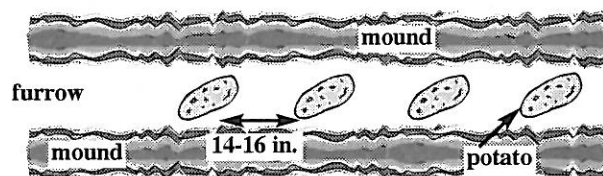
1. Till the desired area without the plow attachment, or with the plow in the highest position.
2. Once you have fitted the plow at the desired height, fix your tilling tines in the cultivating position. Now, press the plow into the soil and, moving forward, dig up the desired earth walls. The plow is ideal for plowing up potatoes and leeks. The blade height is adjustable, which means that the working depth can be more easily controlled.
3. Attachment maintenance is very simple. Just clean with your garden hose. When dry, spray with a light pressurized oil like WD-40.

PREPARATION FOR A POTATO BED

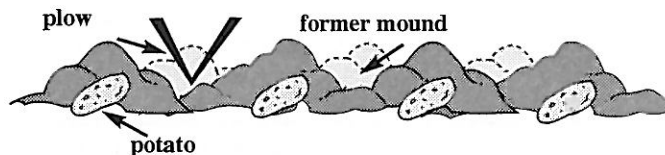
Loosen the soil with the tiller. Fit the new plow attachment. Dig furrows in a distance of 18-20 inches (45-50 cm).



Put the potatoes in the furrow with a distance of 14-16 inches (35-40 cm) between each potato.



Bank or hill the soil on the potatoes by using the plow attachment on the mounded soil.



Bank or hill soil on the potatoes again as soon as they grow out of the mound.

